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ABSTRACT

The use of general purpose classrooms, lecture halls, laboratories and studies at Grand Valley State Colleges is reported. Tables present the percent of room use, percent of station use and fill-factor by day of the week and by hour of the day. Room use is compared to standards and with prior years' usage. (SPG)

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Classroom Utilization
Fall, 1977

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Office of Institutional Analysis

R. Bruce Tweddale
February, 1978

Report #89

HE 010 138

Background

This utilization report is based on the official enrollment in scheduled classes. The rooms counted, by category, are as follows:

A) General Purpose Classrooms -

1) Calder Fine Arts (104, 105, 151)
2) Lake Huron Hall (102, 103, 121, 122, 141, 142, 143, 161)
3) Mackinac Hall (207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 223)
4) Lake Superior Hall (114, 134, 136, 225, 226, 227)
5) Au Sable Hall (114, 206, 207, 208, 209, 215, 216, 234)
6) Field House (11, 16, 18)

Total = 44 rooms

B) Lecture Halls

1) Lake Huron Hall (132)
2) Manitou Hall (102, 107, 123)
3) Lake Superior Hall (134, 174)
4) Lake Michigan Hall (114, 176)

Total = 8 rooms

C) Laboratories

1) Loutit Hall (118, 208, 210, 215, 226, 230, 307, 312, 325, 326)
2) Lake Michigan Hall (136, 253, 275)

Total = 13 rooms

D) Studios

1) Calder Fine Arts (121, 133, 140, 156, 164, 167, 170)
2) Lake Superior Hall (258, 259, 280A)
3) Lake Huron Hall (265)*
4) Pole Barns (2)
5) Cedar Studio (101, 102, 106, 113)

*A reading instructional room included here for summary.

Total = 17 rooms

Room capacity was determined as follows:

A) If seating was "fixed" by either permanently affixed seating or lab stations, this capacity was used.

B) If not fixed, general purpose room capacity was calculated using the formula on page 77 of Manual Six of the Higher Education Facilities Planning and Management Manuals (Western Interstate Commission for Higher Education).

C) If not fixed, labs and studios were figured at the most appropriate ft^2/station figure from Table 53, Manual Two, of the above stated documents.

Three kinds of figures are presented in the tables. The definitions are:

A) % room use
# of rooms scheduled/# of rooms available

B) % station use
# of stations occupied/# of stations available

C) Fill factor
# of stations occupied/# of stations in rooms being used

General Purpose Classroom Utilization

A) By day of the week:

Day	8 a.m. - 6 p.m.		6 p.m. - 10 p.m.		8 a.m. - 10 p.m.	
	% room use	% station use	% room use	% station use	% room use	% station use
Monday	68.9	51.9	44.9	34.3	62.0	46.9
Tuesday	69.5	51.4	46.0	40.9	62.8	48.4
Wednesday	64.5	51.3	47.7	43.3	59.7	49.0
Thursday	69.1	50.0	37.5	22.8	60.1	42.2
Friday	59.3	43.7	0.0	0.0	42.4	31.2
Total	66.3	49.7	35.2	28.2	57.4	43.6

B) By hour of the day:

Time	% room use	% station use
8- 9	47.3	39.4
9-10	78.6	60.3
10-11	88.2	69.7
11-12	88.2	72.5
12- 1	80.9	62.0
1- 2	87.7	68.5
2- 3	75.0	49.5
3- 4	67.7	43.9
4- 5	29.1	18.4
5- 6	20.0	12.7
6- 7	40.9	34.8
7- 8	44.5	36.3
8- 9	32.7	24.0
9-10	22.7	17.9

C) Fill factor - total week averaged

8 a.m. - 6 p.m.: 72.2%
6 p.m. - 10 p.m.: 80.2%
8 a.m. - 10 p.m.: 73.6%

It can be seen that during the daytime (8 a.m. - 6 p.m.) our general purpose room utilization rate averaged 66.3% over the week, with a range from 59.3% on Friday to 69.5% on Tuesday. The evening hours (6-10 p.m.) averaged 35.2% room utilization with a high of 47.7% on Wednesday. In total (8 a.m. - 10 p.m.), our rate of room utilization was 57.2% with a high of 62.8% on Tuesday. Room use was peaked at 88.2% between 10 a.m. - 12 a.m. while station use peaked at 72.5% between 11 a.m. - 12 a.m.

Lecture Hall Utilization

A) By day of the week:

Day	8 a.m. - 6 p.m.		6 p.m. - 10 p.m.		8 a.m. - 10 p.m.	
	% room use	% station use	% room use	% station use	% room use	% station use
Monday	60.0	37.4	43.8	16.9	55.4	31.5
Tuesday	66.3	39.2	65.6	30.5	66.1	36.7
Wednesday	62.5	38.0	53.1	24.8	59.8	34.2
Thursday	70.0	43.6	40.6	15.6	61.6	35.6
Friday	45.0	24.5	0.0	0.0	32.1	17.5
Total	60.8	36.5	40.6	17.6	55.0	31.1

B) By hour of the day:

Time	% room use	% station use
8- 9	50.0	41.8
9-10	95.0	55.2
10-11	87.5	68.7
11-12	90.0	68.6
12- 1	72.5	36.4
1- 2	77.5	40.3
2- 3	55.0	29.4
3- 4	25.0	7.4
4- 5	30.0	9.8
5- 6	25.0	7.7
6- 7	57.5	27.8
7- 8	55.0	26.0
8- 9	30.0	9.5
9-10	20.0	7.0

C) Fill factor - total week averaged:

8 a.m. - 6 p.m.: 65.3%
6 p.m. - 10 p.m.: 50.9%
8 a.m. - 10 p.m.: 62.4%

During the daytime (8 a.m. - 6 p.m.) our lecture hall utilization rate averaged 60.8% over the week, with a range from 45.0% on Friday to 70.0% on Thursday. The evening (6 p.m. - 10 p.m.) averaged 40.6% with a high of 65.6% Tuesday. In total (8 a.m. - 10 p.m.) we averaged 55.0% with a high of 66.1% Tuesday. Room use peaked at 95.0% between 9 a.m. - 10 a.m., while station use peaked at 68.7% between 10 a.m. - 11 a.m.

Studio Utilization

A) By day of the week:

Day	8 a.m. - 6 p.m.		6 p.m. - 10 p.m.		8 a.m. - 10 p.m.	
	% room use	% station use	% room use	% station use	% room use	% station use
Monday	41.8	26.3	19.1	11.6	35.3	22.1
Tuesday	48.8	33.2	8.8	8.3	37.4	26.1
Wednesday	40.6	26.3	8.8	7.4	31.5	20.9
Thursday	47.6	31.1	11.8	6.5	37.4	24.1
Friday	11.8	8.1	0.0	0.0	8.4	5.8
Total	38.1	25.0	9.7	6.8	30.0	19.8

B) By hour of the day:

Time	% room use	% station use
8- 9	9.4	4.0
9-10	51.8	30.8
10-11	57.6	38.3
11-12	49.4	35.1
12- 1	30.6	16.4
1- 2	52.9	32.7
2- 3	54.1	29.9
3- 4	47.1	34.8
4- 5	21.2	24.4
5- 6	7.1	3.6
6- 7	11.8	8.1
7- 8	14.1	9.5
8- 9	10.6	8.4
9-10	2.4	1.0

C) Fill factor - total week averaged

8 a.m. - 6 p.m.: 62.4%
6 p.m. - 10 p.m.: 70.6%
8 a.m. - 10 p.m.: 63.1%

Studio utilization averaged 38.1% during the day, 9.7% in the evening, for a total of 30.0%. For the same periods, station utilization averaged 25.0%, 6.8%, and 19.8% respectively. The highest room and station utilization, by hour of the day, was between 10 a.m. and 11 a.m.

Laboratory Utilization

A) By day of the week:

Day	8 a.m. - 6 p.m.		6 p.m. - 10 p.m.		8 a.m. - 10 p.m.	
	% room use	% station use	% room use	% station use	% room use	% station use
Monday	36.9	22.4	0.0	0.0	26.4	16.0
Tuesday	47.7	30.6	7.7	2.0	36.3	22.4
Wednesday	41.5	26.3	0.0	0.0	29.7	18.8
Thursday	44.6	27.5	7.7	2.0	34.1	20.2
Friday	26.2	16.0	0.0	0.0	18.7	11.4
Total	39.4	24.6	3.1	0.8	29.0	17.8

B) By hour of the day:

Time	% room use	% station use
8- 9	27.7	16.1
9-10	49.2	31.4
10-11	46.2	23.0
11-12	43.1	24.4
12- 1	32.3	22.1
1- 2	56.9	38.4
2- 3	52.3	34.2
3- 4	50.8	35.1
4- 5	32.3	20.7
5- 6	3.1	0.2
6- 7	3.1	0.5
7- 8	3.1	0.9
8- 9	3.1	0.9
9-10	3.1	0.9

C) Fill factor - total week averaged

8 a.m. - 6 p.m.: 62.9%
6 p.m. - 10 p.m.: 29.2%
8 a.m. - 10 p.m.: 62.0%

Laboratory room utilization averaged 39.4% during the day and 0.8% in the evening, for a total average (8 a.m. - 10 p.m.) of 29.0%. The highest room and station utilization occurred on Tuesday. The highest room and station utilization was between the hours of 1 p.m. and 2 p.m.

Utilization (All Rooms Combined)

A) By day of the week:

Day	8 a.m. - 6 p.m. % room use	8 a.m. - 6 p.m. % station use	6 p.m. - 10 p.m. % room use	6 p.m. - 10 p.m. % station use	8 a.m. - 10 p.m. % room use	8 a.m. - 10 p.m. % station use
Monday	57.3	40.4	32.3	21.7	50.2	35.0
Tuesday	61.5	42.6	34.1	28.5	53.7	38.6
Wednesday	55.7	40.7	32.6	27.4	49.1	36.9
Thursday	60.9	42.7	27.7	15.8	51.4	35.1
Friday	42.8	29.5	0.0	0.0	30.6	21.1
Total	55.6	39.2	25.4	18.7	47.0	33.3

B) By hour of the day:

Time	% room use	% station use
8- 9	36.6	32.5
9-10	70.0	51.2
10-11	75.1	59.5
11-12	73.2	60.4
12- 1	62.0	43.0
1- 2	74.6	51.2
2- 3	65.1	38.7
3- 4	56.6	30.2
4- 5	28.0	16.8
5- 6	15.1	8.4
6- 7	30.5	24.8
7- 8	32.7	25.2
8- 9	23.2	14.6
9-10	15.1	10.1

C) Fill factor - total week averaged

8 a.m. - 6 p.m.: 68.4%
6 p.m. - 10 p.m.: 67.7%
8 a.m. - 10 p.m.: 68.3%

Room utilization averaged 47.0%, while station utilization averaged 33.3%. Both factors were fairly even Monday through Thursday, with a definite drop-off on Friday. The highest room utilization occurred at 10 a.m. - 11 a.m., while station utilization peaked from 11 a.m. - 12 a.m.

Comparison to Standards

While no definite standards exist because of institutional differences, the Higher Education and Facilities Manuals published by the Western Interstate Commission for Higher Education do give some ranges based on a daytime of 40 to 45 hours as reasonable maximums.

	Room Utilization	Fill Factor
Classrooms	.56 - .67	.55 - .67
Laboratories	.36 - .53	.55 - .85

This compares with our Fall 1977 rates for a 50 hour week of daytime use shown below.

	Room Utilization	Fill Factor
General Purpose Classroom	.663	.722
Lecture Halls	.608	.653
Laboratories	.394	.629
Studios	.381	.624
Total Rooms	.556	.684

Thus, it can be seen that our room utilization and use of capacity of the room (fill factor) equate well with these suggested ranges.

Comparison with Prior Years at GVSC

Comparison with prior years poses difficulties for several reasons. Room classifications change from year to year, our definition of "daytime" has changed from 45 hours to 50 hours per week, and the capacities of rooms may change by either remodeling or method of capacity calculation. Keeping these cautions in mind, comparisons to Fall 1973, Fall 1974, Fall, 1975, and Fall 1976 are given below.

	# rooms	Room Utilization
General Purpose Classrooms		
1973	46	.690 (45 hours)
1974	44	.678 (45 hours)
1975	34	.775 (50 hours)
1976	41	.695 (50 hours)
1977	44	.663 (50 hours)
Lecture Halls		
1973	9	.573 (45 hours)
1974	9	.676 (45 hours)
1975	8	.695 (50 hours)
1976	8	.623 (50 hours)
1977	8	.608 (50 hours)
Laboratories		
1973	13	.482 (45 hours)
1974	13	.474 (45 hours)
1975	12	.547 (50 hours)
1976	13	.449 (50 hours)
1977	13	.394 (50 hours)
Studios		
1973	7	.425 (45 hours)
1974	12	.411 (45 hours)
1975	13	.549 (50 hours)

	# rooms	Room Utilization
1976	12	.447 (50 hours)
1977	17	.381 (50 hours)
Total		
1973	75	.615 (45 hours)
1974	78	.603 (45 hours)
1975	67	.681 (50 hours)
1976	74	.604 (50 hours)
1977	82	.556 (50 hours)

In reviewing the changes in room utilization from Fall 1976 to Fall 1977, several factors should be kept in mind:

A) The opening of Cedar Studios created four additional studio rooms that were not in use during Fall, 1976.

B) Several rooms which were not included in the Fall 1976 study have been included for Fall 1977. (Two pole barns and Field House 11, 16, and 18 were added.)

C) Overall, we are reporting on 10.8% more rooms and 7.5% more stations for Fall 1977 than was true for Fall 1976.

D) Compared to Fall 1976, we had 0.9% fewer students and produced 3.4% fewer credit hours in Fall 1977.